Workflow Systems, Clariion RAID

Initiating Background Verify

CONTENTS

1. Overview....1
   1.1 Items required....1
      1.1.1 Fibre....1
      1.1.2 SCSI....1

2. Starting the Verify....1
   2.1 Starting Bacground Verify for Fibre....1
   2.2 Starting Background Verify for SCSI....3

3. Looking at your results....4
   3.1 Analyzing results for Fibre....4
   3.2 Analyzing results SCSI....5

4. End....6

1. OVERVIEW

Background verify is used to check a LUNs stability for a Fibre or SCSI based Clariion. This is similar to NT's ChkDsk but is done at a much lower level. You will need to do a verify if you had a Dirty Cache, some disk problem, or if you see Sector Errors when looking at the Clariions logs. Results from the verify can be analyzed afterwards to find if the verify was successful or if further investigation is required.

This document will cover both SCSI and Fibre. The method of implementation for each is very different.

1.1 Items required

1.1.1 Fibre

- Navisphere Agent version 5.25 minimum running on the RAID's host. A kit can be found on the Tech Library as XX0189. Refer to doc 72-3653.
- Navisphere CLI version 5.25 minimum running on the host. A kit can be found on the Tech Library as XX0189. Refer to doc **72-3653**.
- You must be running NaviCLI on the host machine.

1.1.2 SCSI

- DassMgr.Exe: This should already be on the system in **%HomeDrive%\Clariion**. If not a copy can be found in the Intranet / Knowledge Base / Clariion as kit **XX0188.ZIP**.
- An understanding of using DassMgr. If you are not familiar with DassMgr then refer to document **Analyzing Clariion SCSI errors** doc **XX0183** in the Clariion Knowledge Base.
- Null modem cable connected between the Clariion's SP and a computer running DassMgr.

2. STARTING THE VERIFY

2.1 Starting Bacground Verify for Fibre

You can either run the Clariion CLI commands locally or over the network as long as you are connected through TCP/IP, however the SetSniffer command must be run locally. For best results CLI version should match the Navisphere Agent version.

1) Ensure the Agent is talking with the Clariion.

   a) Go to **Administrative Tools / Services**.

   b) Select **Navisphere Agent** and hit **Stop**. Wait for it to stop and then hit **Start**. After about 20 seconds you should get a Navisphere Agent has Started message box. If you see **No Devices Being Managed** box you have a problem with Agent seeing the RAID and you should refer to doc 72-3653 Installing Navishere for hints.

2) Start CLI and have it ping the Agent.

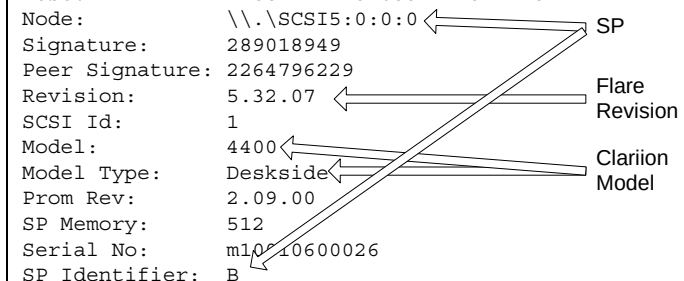
a) Open a command prompt. Agent should be installed in the **%HomeDrive%\Program Files\EMC\Navisphere CLI** directory. Go to this directory.

b) Type **navicli getagent** . You should see something like the following:

```
Agent Rev:      4.2.2 (4.3)
Name:           SP_113A1445
Desc:           "DGC RAID 5 0532 113A1445
Node:           \\.\SCSI5:0:0:0
Signature:      289018949
Peer Signature: 2264796229
Revision:       5.32.07
SCSI Id:        1
Model:          4400
Model Type:     Deskside
Prom Rev:       2.09.00
SP Memory:      512
Serial No:      m10010600026
SP Identifier:  B
Cabinet:        DPE

Agent Rev:      4.2.2 (4.3)
Name:           SP_86FE0C45
Desc:           "DGC RAID 5 0532 86FE0C45
Node:           \\.\SCSI5:0:1:0
Signature:      2264796229
Peer Signature: 289018949
Revision:       5.32.07
SCSI Id:        0
Model:          4400
Model Type:     Deskside
Prom Rev:       2.09.00
SP Memory:      512
Serial No:      m10010600026
SP Identifier:  A
Cabinet:        DPE

Agent Rev:      4.2.2 (4.3)
Name:           SP_AB12F046
Desc:           "DGC 0511 AB12F046"
Node:           \\.\SCSI6:0:0:0
Signature:      2870145094
Peer Signature: 1903332678
Revision:       5.11.03
SCSI Id:        0
Model:          5600
Model Type:     Deskside
Prom Rev:       3.21.00
SP Memory:      512
Serial No:      95-9494-159
SP Identifier:  A
Cabinet:        DPE
```



In the above example you will notice:

- There are 2 RAIDs, a 4400 and a 5600 even though the actual devices are an FC4500 and an FC5700. A 4400 is the base family of a FC4500 and a 5600 is the base family of the FC4700.
- In the case of the FC4500 you will notice 2 SP's. In the case of the FC5700 you will notice only 1 SP active. You should be above to see both SP's. If not, that could be a sign of a problem and should be investigated. All Fibre RAIDs except the FC5200 have 2 SP's.

c) We will used the FC4500 as our example. Note the Node name for the SP you wish to communicate with. For starting verify commands you will need to target the SP that owns the LUN, ensure you note the both SP's node names. In the case above our **<DeviceName>**is **\\.\SCSI5:0:0:0**. Enter the following to ensure communication to the SP and again note case sensitivity.
NAVICLI -d <DeviceName> ARRAYNAME
ie. **NAVICLI -d \\.\SCSI5:0:0:0 ARRAYNAME**

You should have a response back looking something like:
Array Name: B-m10010600026
If not you have a problem with communications.

3) Find the LUNs and who owns them.

a) List the LUNs and see which SP owns them. Enter the following command

b) **NAVICLI -d <DeviceName> GETLUN > LUNS.TXT**

c) Open the LUNS.TXT. For each **Logical Unit Number** section heading you will see a **Current Owner**. Note each LUN, where the RAID Type is RAID5, and note the LUN's associated current owner.

4) Start the verify. For each LUN noted above do the following. Note that for the <Lun#> you must match it to the SP (ie. **\\.\SCSI5:0:0:0**=SPA, **\\.\SCSI5:0:1:0**=SPB).

a) Type **NAVICLI -d <DeviceName> setsniffer <Lun#> 1 -bv -bvtime ASAP**

b) If you get a **Caller not privileged** message it means you have to add yourself to the administrators list. On the host open in **Notepad** the file **D:\Program Files\EMC\Navisphere Agent\agent.config**. Under the line **user Administrator@NOVA** add a new line like this:

user <YourLoginName> @ <YourClientComputerName>

Save the file and restart Navisphere Agent in the Host's Services menu.

c) If you get Tresspass is currently happening… then you have specified the wrong SP in you <DeviceName>. Use the Device name for the appropriate SP (as noted from the getagent command).

2.2 Starting Background Verify for SCSI

1) Start DassManager.

2) Enter Engineering Mode **(<Ctrl><Shft>P**) then **(<Shft>ENG**) **<Enter>.** A Blue ENG must appear in the top right of the DassMgr window.

3) Go to the **Presentation Utility**. Note the bound LUN numbers (the numbers beside ENA). If any LUNs show as RDY then those LUNs are owned by the second SP. Leave the RDY LUNs for now.

4) **<Shft>6 <Enter>** to the **Grid Manager Main Menu**.

5) Go to **Change Parameters / Change Logical Unit Parameters / Change Unit Verify Configuration**.

6) **For each** of the LUN numbers recorded above do the following:

   a) Enter the **LUN #** and hit <Enter>.

   b) Sniffing State: **Enabled**

   c) Sniffing Time: **30**

   d) Start a background Verify: **Y**

   e) Background Verify Time: **0**

   f) Clear the verify reports: **N**

7) When done hit **<Shft>6** all the way back to **Grid Management Main Menu**.

8) Go back into **Presentation Utility**.

9) For each LUN do the following:

   a) Select any disk in the LUN and hit **<Enter>**.

   b) In State you should see **Enabled and Background Verifying**.

10) **Check your status** of the background verify. The entire time for the verify will depend on many things suchas the size of the disk. Generally for a 69GB disk set this should take about **1.5 hours**.

    a) Hit **<Shft>6** all the way back to **Grid Management Main Menu**.

    b) Select **1 – Presentation Utility**.

    c) Select a disk in the LUN you are verifying and hit **<Enter>**.

11) Exit engineering mode by enterring **(<Ctrl><Shft>P**) then **(<Shft>USER**) **<Enter>.** The Blue ENG must have diss-appeared from the top right of the DassMgr window. Time for a LUN will vary on many factors but you should assume about 4 hours. During this time performance will be lower but workflow may proceed as normal.

12) Any LUNs showing as RDY are owned by the second SP. You must disconnect from the serial cable from the first SP and connect it to the second. Follow the above procedure for the LUNs owned by the second SP.

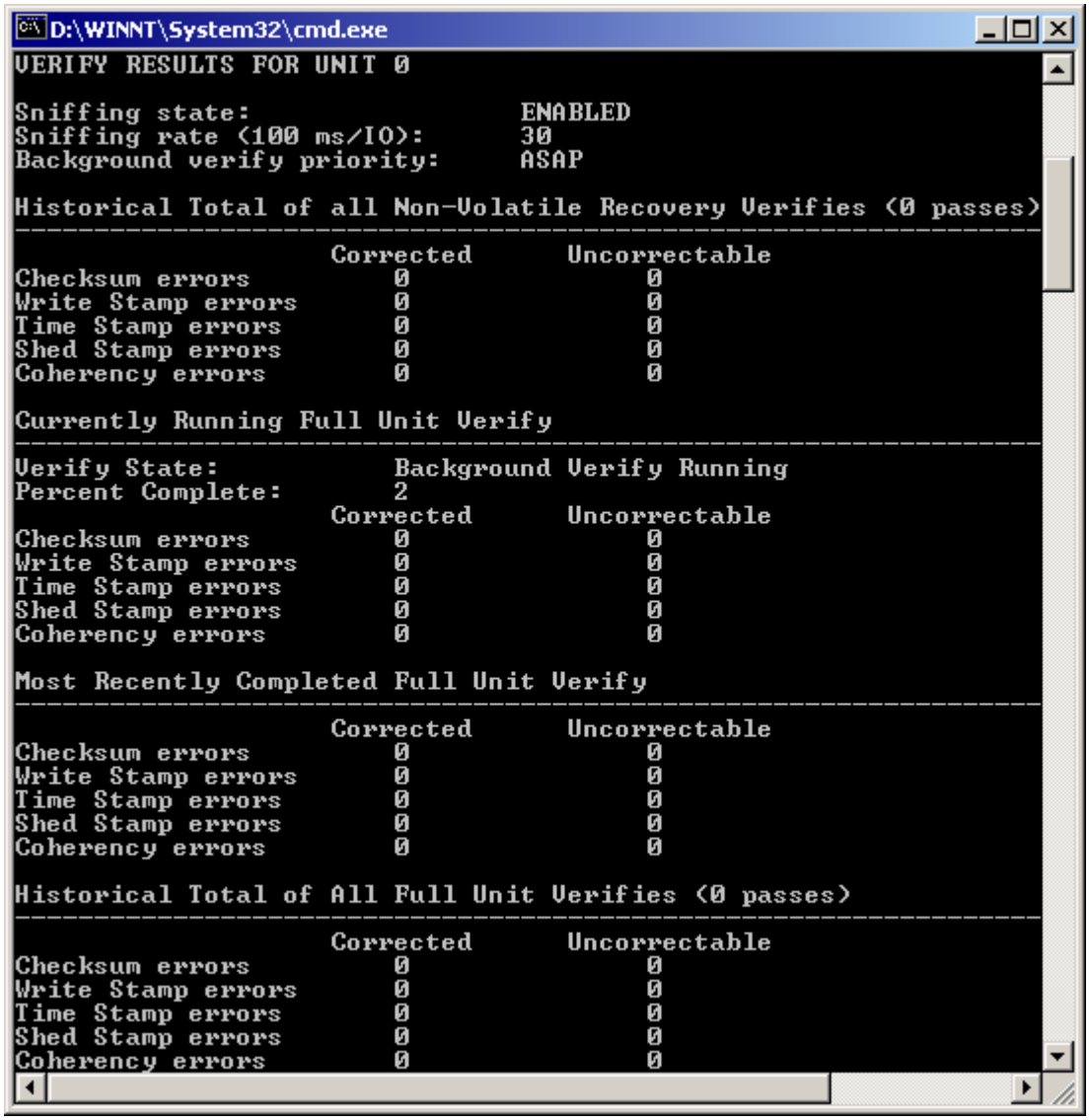
3. LOOKING AT YOUR RESULTS

Once the checks have been done you should view the results.

3.1 Analyzing results for Fibre

1) Getting your current status.

a) Run the command **NAVICLI -d <DeviceName> GETSNIFFER <Lun#>** Ensure that the d<DeviceName> matches the owner of the LUN. You should see the following.



b) You will see stats on historical tests and where you are in the current test. Wait for the current test to complete (uner Currently Running / Percent Complete). For a 260GB LUN it should take about 2hrs to complete.

2) Once the test is complete take a look at you **Most Recently Complete Full Unit Verify** results. If you see any Uncorrectable Errors we will have to consider further action for the RAID.

3) Close Navisphere CLI window.

3.2 Analyzing results SCSI

1) Start DassManager.

2) Enter Engineering Mode **(<Ctrl><Shft>P**) then **(<Shft>ENG**) **<Enter>.** A Blue ENG must appear in the top right of the DassMgr window.

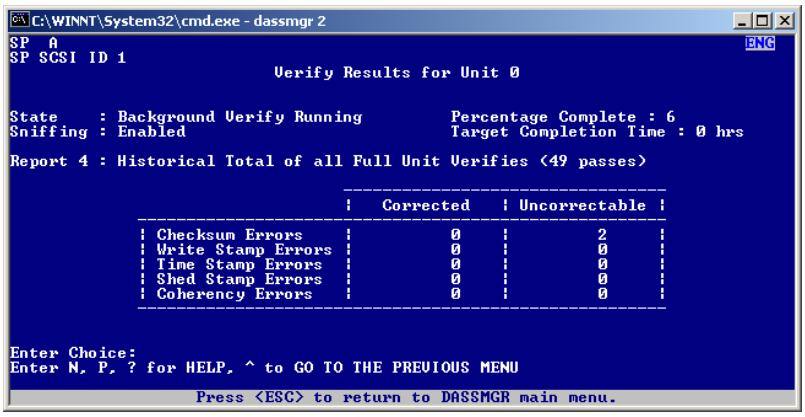
3) Hit **<Shft>6 <Enter>** to the **Grid Manager Main Menu**.

4) Select **4 – View Maintenance Information**.

5) Select **3 – Display Verify Results**.

6) For each of the LUNs you had verified do the following.

   a) Enter the **LUN** number and hit **<Enter>**. You should see the following.



   b) Notice that the above chart represents the **Historical Total**. Select **'N'** to view the other charts for this LUN. Look for the **Most Recently Completed Background Verify** (done only after the verify has been completed). If there are any Uncorrectable Errors we may need to further investigate the RAID.

   c) Repeat for the other LUNs.

7) Hit **<Shft>6 <Enter>** to the **Grid Manager Main Menu**.

8) Gi back into user mode, **(<Ctrl><Shft>P**) then **(<Shft>USER**) **<Enter>.** The Blue ENG must disappear fromthe top right of the DassMgr window.

9) Close Dassmgr.

4. END

Any questions with the above procedure please forward to:

Derek Braendel, CreoScitex

(604) 451-2720, ext 2605

derek_braendel@creoscitex.com